REMARKS

The Office Action dated June 25, 2003 has been received and carefully noted. The following remarks are submitted as a full and complete response thereto.

Claims 1-21 are pending in this application. No new matter has been added. In view of the following remarks, reconsideration and allowance of these claims is respectfully requested.

I. CLAIM REJECTIONS UNDER 35 U.S.C. §102

Claims 1-6, 9 and 19-21 were rejected under 35 U.S.C. §102(e) as being anticipated by DEAN et al. (U.S. Patent No. 6,173,173). The Office Action alleges that DEAN teaches all of the limitations of the claims. Applicant respectfully submits that the prior art cited in the Office Action fails to teach, suggest or disclose the features of the claims.

Claim 1, upon which claims 2-8 are dependent, recites a method for performing a detach of a terminal registered to a telecommunication network by associating an identification for the terminal, deriving a signature for the identification, and allocating a pair consisting of the identification and the signature to the terminal. The method comprises a step of sending, receiving, comparing and detaching. The sending step sends a detach request including the identification and the identification signature from the registered terminal to the network. The receiving step receives the detach request at the network side. The comparing step compares the received detach request with a record of

registration data of the terminal kept at the network side. The detaching step detaches the terminal from the network, if the received detach request coincides with the record of registration data.

Claim 9, upon which claims 10-18 are dependent, recites a method for registration of a terminal to a telecommunication network. The method comprises the steps of associating an identification for the terminal, deriving a signature for the identification, and allocating a pair consisting of the identification and the signature to the terminal.

As a result of the claimed invention, a system and method for performing a secure detach procedure in a radio telecommunication network is provided. One advantage of the present invention is that a simple and useful method is provided for preventing a malicious user from interrupting a third party's calls by sending detach messages with random identities to mobile stations. These advantages are not all inclusive but merely exemplars of some of the benefits of the invention.

Applicant submits that DEAN fails to disclose or suggest the elements of the invention as set forth in the claims, and thereby fails to provide the critical and nonobvious advantages that are provided by the invention. In order to anticipate a claim, it is well established that a reference must disclose every element of the claim. *Verdegaal Bros. V. Union Oil Co.,* 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.,* 9 USPQ2d (Fed. Cir. 1989).

Applicant submits that DEAN fails to anticipate the claims of the invention because DEAN fails to disclose, teach or suggest several limitations of the claims. First, DEAN fails to disclose or suggest the steps of "sending a detach request" and "detaching said terminal from said network" as recited in independent claim 1. One aim of the present invention is to achieve "validity detaching of an authentic terminal", page 13, lines 8 through 28, page 3, lines 28 through 31 of the application. The present invention relates, in one embodiment, to detaching a user who is legitimately authorized to use a telecommunication network.

However, the object underlying the teaching of DEAN is in direct contrast to the object underlying the present invention. DEAN relates to a system and method for invalid mobile telephone call termination. The process of terminating invalid mobile telephone calls as disclosed by DEAN is distinctly different from the process of detaching terminals as recited in independent claim 1. For instance, killing/terminating a call does not lead to terminal being detached (de-registered) from the network. In column 3, lines 1-9, DEAN specifically states, "The invalid call terminating method and system of the present invention, or enhanced kill call capability terminates potentially fraudulent calls in the mobile home market of the mobile telephones service subscriber. This capability enables service providers to tear down fraudulent calls by using either a third party client application or a technician interface (TI) command." Only a call is killed or forcibly terminated. In other words, DEAN targets illegal calls which are being conducted on its network. DEAN alleges that it detects "illegal or fraudulent calls" and

terminates such calls. However, the terminal remains attached to the network. Thus, a terminal may still remain attached to the network even upon a call from the terminal is terminated. Also, a terminal, which thus remains attached, may easily initiate a new call after a previous call has been "killed."

Second, DEAN also fails to teach, suggest, disclose or teach the step of "sending a detach request including said identification and said identification signature from said registered terminal to said network." Rather, in DEAN, a "kill call" command is generated. Such a command, however, is call specific, and not specific for a terminal. In addition in DEAN, an invalid call is detected at a server computer, which in turn generates the above-mentioned "kill call" command as discussed in DEAN in column 3, lines 17 through 44. This aspect of DEAN differs from the claims of the present invention. Namely, according to independent claim 1, the detach request is a terminal originated detach request, and not a server originated request for call killing as disclosed in DEAN.

In the present invention, the "detach request" is generated from the terminal and concerns the terminal and its logical association to the network. This, however, is not the case in DEAN because the kill call request is originated by a vendor computer and concerns a call as such and not the terminal (a killed call leaves the logical association of the terminal to the network unchanged).

Another limitation which DEAN does not teach, disclose or suggest is "a signature" as recited in independent claims 1 and 9. Independent claim 1 recites a step of

"sending a detach request including said identification and said identification signature from said registered terminal to said network." Independent claim 9 sets forth, among other steps, a method for registration of a terminal to a telecommunications network. The method comprises associating an identification (e.g., TMSI) for the terminal, deriving a signature for the identification (e.g., TMSI_SIG), and allocating a pair consisting of the identification and the signature to the terminal.

Applicant's claimed invention provides the derivation of a signature (e.g., TMSI_SIG) by the telecommunication network controlling device, or MSC, for the terminal. The derivation is performed solely on the basis of the associated identity (e.g. TMSI) of the terminal by the MSC. The TMSI and the TMSI_SIG of the terminal are established as a pair of data items as parameters for identifying a specific mobile station by the telecommunications network for attach and detach operations, page 9, line 22 through page 10, line 14 of the application.

In contrast, the detection according to DEAN is based on a detected RF fingerprinting (DEAN, column 1, lines 30 – 38). In DEAN, a terminal is identified by an RF fingerprint, which is distinctly different from a pair of an identification and a signature of the identification. The technique in DEAN requires an RF fingerprinting equipment installed at a cell site and various additional processing such as monitoring call attempts, storing a detected RF pattern and the like, as discussed in DEAN in column 1, lines 30 through 38 and column 3, lines 27 through 31. Thus, an RF fingerprint detection does not disclose, suggest or teach at all to the usage of a terminal identifier and

a corresponding signature derived therefore. For example, a terminal may have different RF fingerprints in different radio environments, or different terminals may have the same RF fingerprint in the same or different environments, so that a unique identification of a respective terminal cannot be guaranteed.

Although the expression "signature" is mentioned in DEAN in column 7, line 26 through column 8, line 6, the term "signature" is used to denote the same technical item as "ID" as discussed in column 5, the table, entry DN and the corresponding text of DEAN. Thus, DEAN does not contain any teaching that a signature is derived for a terminal ID. The Office Action relies upon columns 7 and 8 of DEAN to allegedly support this limitation. Applicant respectfully notes that this passage relates to the server/client relationship and does not relate to the terminal (mobile station).

It should also be noted, that DEAN does not allocate the signature until the client wishes to initiate a kill call request. In contrast, Applicant's claimed invention as set forth in independent claim 9, for example, establishes the identification (TMSI) and signature (TMSI_SIG) pair upon registration of the mobile subscriber. The pair is then subsequently used to authenticate detach requests originating from the mobile subscriber, as discussed above.

The signature disclosed in DEAN, column 7, lines 55 through 61, is not derived for the RF fingerprint but is based on a random key plus a password. A random key may take various possible values similar as a password which may be changed to various possible passwords. Both the random key and password are, however, not associated to a

terminal (mobile station). Rather, the random key is associated to a client to the kill-call server (client = vendor computer, DEAN, column 3, lines 56 through 59 and Fig. 1). Thus, the signature mentioned in DEAN is not a signature derived for a terminal identifier.

For at least the above reasons, Applicant submits that independent claims 1 and 9 patentably distinguishes over DEAN and is in condition for allowance.

In addition, claims 2-8, 19, 20 and 21 depend from claim 1 and claims 10-18 depend from claim 9 and are therefore allowable for the reasons that claims 1 and 9 are allowable, respectively, and for the specific limitations recited therein.

II. CLAIM REJECTIONS UNDER 35 U.S.C. §103

Claims 7, 8, and 10-18 are rejected under 35 U.S.C. §103(a) as being unpatentable over DEAN in view of KURIKI (U.S. Patent 5,765,105).

The Office Action alleged that DEAN discloses all of the elements of the claimed invention, with the exception of the identification being a temporary mobile subscriber identity or an international mobile subscriber identity. The Office Action relies upon KURIKI to allegedly cure the deficiencies of DEAN. Applicant submits that the prior art cited in the Office Action fails to teach, suggest or disclose the limitations of the claims. Therefore, reconsideration is respectfully requested for the reasons which follow.

Applicant submits that the prior art fails to disclose or suggest the elements of the invention as set forth in claims 7-8 and 10-18, and thereby fails to provide the critical and nonobvious advantages that are provided by the invention. To establish a prima facie

case of obviousness, the prior art reference (or references when combined) must teach or suggest all of the claimed limitations. There must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. The teaching or suggestion to make the claimed combination must be found in the prior art, and not be based on Applicants' disclosure. See M.PE.P. §§ 2143.01 and 2143.03.

The Office Action admits that DEAN fails to disclose, suggest or teach the identification/signature pair. KURIKI, like DEAN, also fails to teach the use of an identification/signature pair used during both the registration of a mobile terminal and detachment of the mobile terminal from the telecommunication network.

Rather, KURIKI teaches the use of the well-known identifiers IMEI and IMSI, which are identifiers that identify the mobile equipment and the mobile subscriber, respectively. The IMEI and IMSI identities, however, are fixed identities that are assigned to the particular mobile equipment and subscriber identity module (SIM) card in use by the mobile user. (KURIKI, column 2, line 60 through col. 3, line 10). The combination of IMEI and IMSI are then transmitted to the communication concern's system for validation during call origination and call termination requests.

Namely, these two data items are unrelated and one is not a signature of or for the other. The IMSI is subscriber specific and predetermined for the SIM whereas the IMEI is predetermined and equipment specific for the terminal.

Therefore, the IMEI or IMSI identity of Kuriki is not derived, which is in direct contrast to Applicant's claimed invention. As discussed above, the signature of Applicant's claimed invention is derived from the identity of the mobile terminal by the telecommunication network to form an identification pair, which is then used for registration and detachment purposes. Applicant submits that the combination of DEAN and KURIKI fails to teach or fairly suggest Applicant's claimed invention as set forth in independent claims 1 and 9, rendering claims 1 and 9 patentably distinguishable over DEAN and KURIKI. Since claims 7-8 and 10-18 depend from claims 1 and 9, respectively, claims 7-8 and 10-18 are also patentably distinguish over DEAN and KURIKI, taken in combination or alone, and these claims are in condition for allowance.

CONCLUSION

Claims 1-21 are pending. No new matter has been added. In view of the above remarks, reconsideration and allowance of these claims is respectfully requested.

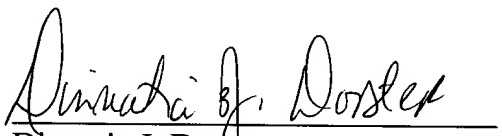
As discussed above, DEAN and KURIKI, taken in combination or alone, fail to render the claimed invention obvious because these references fail to disclose or suggest several limitations of the claimed invention. Likewise, DEAN also fails to anticipate or render obvious the claimed invention because DEAN fails to at least teach or suggest the steps of sending a detach request, detaching the terminal and allocating a pair consisting of the identification and the signature to the terminal. Thus, Applicant submits that certain clear and important distinctions exist between the cited prior art and the claimed invention. Applicant submits that these distinctions are more than sufficient to render the

claims of the invention unanticipated by and unobvious in view of the prior art. It is therefore requested that claims 1-21 be found allowable, and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, Applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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